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OF THE IMPROVEMENT OF SOILS WITHOUT MANURES.

Soils may be improved in several ways without manures, and their produce of useful vegetables much increased; the principal ones are, pulverization, an alteration of their constituent parts, draining, or watering, and by consolidation.

Pulverization.—It is well known that plants will not grow in a soil which is too hard and compact to admit of the free admission of air, water, and heat, and for the extension of the roots of plants. An abundance of roots is essential to the thrifty growth of most plants, and pulverization promotes the formation of roots and fibres. Hence the utility of stirring the soil after the plant has begun to grow, to increase the formation of roots and fibres. Pulverization also increases the power of the soil to absorb moisture from the atmosphere, by rendering it something like a piece of sponge. Hence the utility of hoeing plants when the ground is dry, because it increases the absorbent powers of the soil. Therefore, the old custom of hoeing when the ground is moist, is not founded on truth. A soil is much more heated by the air, when laid light than when compact; because the earths of a soil are bad conductors of heat, and could not be readily heated by contact only, and therefore require the free ingress of warm air, to produce a genial warmth. Pulverization also increases the food of plants, by enabling water, which contains carbonic acid, to pass freely to the roots; it also exposes the manures of the soil to heat, light, &c., producing fermentation, and thus preparing them to answer as food for plants.

Alterations of the parts of soils may be produced either by adding what is deficient, or taking away that part which is in excess, or by changing the nature of parts by fire.

To ascertain the composition of soils which are unproductive, in order to improve them by an alteration of their parts, it is necessary to compare them with fertile soils in similar situations, and the same neighborhood; the difference may in some cases indicate the proper method of improvement. If the fertile soil contain a large quantity of sand in proportion to that of the barren soil, sand added to the latter may improve it; if deficient in clay or lime, these must be added. If a soil contain acid or the salts of iron, although otherwise of a good texture or composition, it cannot produce the noble class of plants. If a soil contains sulphate of iron (copperas,) the proper remedy will be a top-dressing of lime; and the same would be proper for all *sour* soils. Where a soil contains too much lime, a dressing of sand will improve it; and sandy soil would be benefited by a dressing of clay or marl, or even swamp mud. Soils having the nature of peats, are rendered exceedingly productive by draining and a pressing of sand. The materials necessary for these purposes are generally found near at hand. Many of the poor sandy soils of New England might be greatly improved by the bog mud which is found in the low places. Beds of sand and gravel are almost always found below clay.

Burning has been long practiced in our country on new soils; less, however, with a view to improve the soil than to clear the ground.

Soils which contain a large portion of dead vegetable matter, or which are composed of stiff clay, may be economically improved by removing the top sod, drying it, and then burning it on the sod, or if covered with bushes, cutting them down and burning them on the ground. The effect of fire on the soil is, to render it less compact, lighter, and not so retentive of moisture; and when properly applied it will render a stiff, damp, and cold soil into one dry, powdery and warm: but where a soil already possesses these essential qualities, fire must be injurious, because it will destroy a portion of the vegetable matter in the soil. It is evident, then, that sandy soils are injured by burning. We have seen the experiment tried on a large scale in New Hampshire, of clearing a sandy soil without fire. Four acres of *pine plain* had the wood and underbrush cut and carried off clean, and then sowed with winter rye and grass seed. Adjoining this was a piece of the same kind of soil, which was cleared in the usual way by fire, and sowed at the same time with rye. The first piece yielded 40 bushels of rye to the acre, while the piece burnt over, yielded only 21 bushels to the acre; and the former piece has since yielded much more pasture feed than the latter. Here the fire burnt up the vegetable substances of the soil and left it poor.

Draining and Flooding.—Where a soil rests upon a subsoil or bed which does not permit water to pass through it with facility, the water will collect on the surface and become stagnant, which obstructs the free circulation of the juices of plants and thus injures their growth. Hence the utility of surface draining, or small ditches and gutters. Some soils are full of springs, causing them to be cold and unproductive, and hence the origin and utility of drains undes the surface, to convey away the superfluous water.

In many parts of New England meadows are flooded in the fall and during the winter, with a beneficial effect—the water generally being impregnated with animal and vegetable matter, particularly if the stream flows through a cultivated region. In cold seasons it preserves the roots and leaves of grass from being injured.

Consolidation.—Every gardener knows the benefit of treading in seeds, on some kinds of soil; and the utility of the roller is beginning to be appreciated by our farmers. Porous and loose soils are much benefited by being compressed, particularly after receiving a dressing of loam or sand. Light sandy soils are much improved by the use of a good roller.

Rotation of Crops.—There is another means of improving a soil without the use of manure, by growing different kinds of plants in succession upon the same soil; this is called a *rotation of crops.*

It is well known that all plants will not thrive equally well on the same soil; because, some require a particular part of the soil to perfect their seeds, while others require another part. Therefore, if the different kinds of vegetables are planted in succession on the same soil, each one will deprive it of that particular principle which is suited to its nature. This kind of rotation is found to take place in nature. Black and grey ash is generally found to succeed a growth of pitch pine. New lands produce strawberries and dwarf blueberries, and in a short time, they exhaust the soil of the particular principle necessary to their healthy growth, and then decay and disappear, and are replaced by other plants. The manner in which certain plants *travel* from one place to another, is well known, as mint, crow-foot, &c.

The following general principles have been laid down as to the rotation of crops:

1. All plants exhaust the soil more or less.
2. All plants do not equally exhaust the soil.
3. Plants of different kinds do not exhaust the soil in the same manner.
4. All plants do not restore to the soil the same quantity or quality of manure.
5. All plants are not equally favorable to the growth of weeds.

The following consequences may be drawn from these principles:

1. However well a soil may be prepared, it cannot long nourish crops of the same kind in succession, without becoming exhausted.
2. Every crop impoverishes a soil more or less, according as more or less is restored to the soil as manure, from the decay of the plant cultivated.
3. Perpendicular rooted plants, (clover, beets, &c.) and such as root horizontally, (wheat, Indian corn, &c.) ought to succeed each other.
4. Two plants favorable to the growth of weeds, ought not to follow each other.
5. Such plants as greatly exhaust the soil, (as the grains and Indian corn,) should only be sown when the land is in good heart.
6. In proportion as a soil is exhausted by successive crops, plants which are less exhausting ought to be cultivated.—*Scientific Tracts.*

Refuse Vegetables.—Let every thing of a waste nature on the farm be converted into manure. Not a single production of any kind should be wasted. We have seen some farms on which the spurious vegetation alone was sufficient, if properly husbanded, to manure half the soil cultivated.—*Maine Cult.*

The Crops.—The Burlington (Vt.) Free Press mentions the appearance of the blight among potatoes in that vicinity, which will seriously affect the yield. The wheat and corn crops, however, are uncommonly large and fine in that region—oats fair, barley good, and hay full an average.

Wool.—Mr Abraham Dix, of Geneva, has sold his crop of wool, 5000 pounds, at 40 cents, for the Boston market. Same crop brought last year 48 cents, and was sent by the purchaser direct to England.

He who never changes any of his opinions never corrects any of his mistakes.

From the Journal of the Royal Agricul. Society of England.

ON THE PREVENTION OF CURL AND DRY-ROT IN POTATOES.

By H. S. Thompson.

To Ph. Pusey, Esq.—My Dear Sir,—The prevention of curl and dry-rot in potatoes is a problem the solution of which is important to every occupier of either farm or garden, and I therefore trust that you will not consider any apology necessary when I request the insertion, in the Journal of our Society, of the following paper, which contains the result of my observations and experiments on this subject for the last five years. I will first mention the result to which I have been led, and then enumerate the facts and state the reasoning which to my mind make such a conclusion inevitable. The result, then, at which I have arrived is, that curl and dry-rot are caused by leaving the potatoes intended for seed in the ground until ripe, and that, on the other hand, these diseases may be prevented by taking up the seed-potatoes whilst the tubers are unripe, and the tops still green.

1840.—In the spring of 1840 I planted 16 acres with potatoes; and having, for some previous seasons, had my attention strongly drawn to the failures in the potato-crop which had caused so much discussion in Scotland and elsewhere, I paid more than ordinary attention to the selection of seed in this instance, and made choice of two kinds of round red potatoes, both of which were quite new to my land. One of them had been procured from Messrs. Drummond, Stirling, in 1835; the other from Messrs. Lawson, Edinburgh, in 1837; and the gentleman who had grown them in the intervening seasons, having two farms, one of stiff, the other of light land, had changed his sets regularly from one to the other. He spoke highly of both kinds, and when boiled they were mealy and good: one kind, however, more so than the other. The land on which I planted them, a sandy loam lying near the rock (geological formation—new red sandstone,) was in a high state of cultivation, having had a heavy crop of swedes consumed on the land by sheep, the property of the off-going tenant; and my reason for planting it with potatoes was solely because I was aware that if sown with corn it would be so lodged as to be nearly worthless. I naturally anticipated a heavy crop. They were planted in the last week in April, the season remarkably favorable; and I was much disappointed to find that the braird was weakly, and soon showed symptoms of curl. This increased, and though few of the plants perished, nearly the whole were unhealthy. I particularly noticed that the kind of potato which had been the most mealy when boiled suffered most from the curl; and though, from the great richness of the land, they grew, and gave a produce greater than could have been expected under the circumstances, it was decidedly a failing crop. I was so much surprised at the appearance of curl that I watched and examined the plants at several periods of their growth, taking up roots here and there wherever I observed one either better or worse than its neighbors. The appearance of all those affected was nearly the same. The set, as long as the weather was dry, crumbled and perished—the disease seeming to proceed from certain spots or pits as centres, and gradually destroying the whole set. The cut sets were the worst, and the decay always commenced from the cut side of the set, but the whole ones also suffered. As soon as the weather became wet, these appearances changed, and the diseased portion of the set resembled a brown sponge, which after a short time became black and offensive. The effect on the plant was well marked. Wherever the disease had made a decided impression on the set, the stalks of the plant were marked with brown streaks and patches, and evidently showed that the juices which they were conducting from the set were vitiated and noxious. The part of the stalk to which I directed my attention was that underground, in which it was it was easy to trace the progress of the disease, from their being white and nearly transparent. Wherever the top was curled I found the stalks unsound and the set diseased. In some cases the disease carried the day, and the set reaching an advanced stage of decomposition, and the stalks below ground becoming quite brown, the top died away. In a subsequent season (1844) most of the sets attacked perished; but on this occasion a very great majority of the plants threw out strong roots, and finding an abundant supply of food, maintained a constant struggle with the with the disease, and eventually yielded a good half crop. A few green healthy plants stood prominently out amongst the brown half-withered tops of the rest; and on examining these I found them to be plants of a white potato (known by the name of "Cheshire white,") a few chance sets of which had been accidentally mixed with the rest. These white potatoes had been previously in use for the table, but were very inferior, in point of mealiness, to the red ones selected for seed. The experience of this season convinced me that curl, dry-rot, and wet-rot, are one and the same complaint; that curl is a mild attack of the disease, which, when violent, destroys the set before it can germinate; and that it assumes the form of dry or wet rot according to the degree of moisture of the soil or season. I have repeatedly seen potatoes affected with dry-rot in a few days assume the appearances by which ret-rot is usually described; and this change was evidently attributable to heavy rain which had fallen in the interval. The autumn of 1840 was remarkably fine; and being anxious to take advantage of it I began to take up my potatoes as early as the 2nd of October; before they were ripe, and when, for the most part, they would not bear handling without what is provincially called "*slipping* their skins."

1841.—As I still considered the red potatoes above-mentioned to be of good kinds, and that the occurrence of curl was accidental. I determined to give one of them another trial; and accordingly, in 1841, I planted about an acre and a half with sets from the crop of 1840 which had suffered so much from curl. They were planted as late as the 8th of June, the land having been previously sown with lucerne, which had failed; the weather dry and unfavorable; yet, in spite of these disadvantages, they came up perfectly well, grew luxuriantly, and produced an excellent crop. Side by side with these potatoes two other kinds were grown; one a black kidney, a very superior potato for the table; the other a cattle potato called the mangould wurtzel. These were bought sets, nor do I know how they had been previously treated. Both, however, were failing crops. The experience of this season is valuable, running, as it does directly counter to what has been so frequently asserted by the authorities, viz., that curl is sure to increase, and that curled sets are to be avoided like the plague. The explanation of the rule and of this exception to it appears to me to be as follows:—Curled potatoes ripen early, some weeks before the healthy plants, and consequently are almost always too ripe when taken up to make good sets, and if so used the disease will rapidly increase each successive season. In this instance, however, the infected potatoes were taken up before they were ripe, and proved to be as good sets as could be used. To proceed. The potatoes above mentioned were taken up the second week in November, 1841. Having been planted so late, the round reds were not ripe; the black kidney's, a much earlier variety, were.

1842.—These potatoes were used for seed in 1842. The unripe reds produced an excellent crop, without, as far as I am aware, a single failing plant. The ripe black kidneys were again a failing crop. In the middle of May of this year (1842) I planted with these black kidneys a small piece of old grass-land, as a preparation for forest-trees. This plot of ground had been from time immemorial flowed over by the waste water from an old and ill-constructed farm-yard immediately adjoining, and was therefore as rich as could well be imagined. The potatoes had immense tops, but very small tubers; and, when boiled, the favorite black kidneys seemed quite to have changed their character. Instead of the firm mealiness for which they are remarkable, they now bore much resemblance to a piece of yellow soap. They also continued growing till the frost and snow made it dangerous to leave them any longer in the ground, and they were taken up still thoroughly unripe. The round reds, grown on old-going land, were taken up ordinarily ripe, and were mealy and good.

1843.—In 1843 these two kinds were again used for seed, and the white reds had numerous failures, but the unripe black kidneys were as even and vigorous a crop as could be wished. I had not yet learnt to attribute the failure to its right cause, and was accordingly much puzzled to account for the curl among the round reds, which had thriven so well the two previous seasons. I was absent on the Continent during the autumn of 1843; but my bailiff informed me that, in consequence of a heavy fall of snow in October, he took up the potatoes earlier than he intended, and that the red potatoes were not ripe, but that the black kidneys (a capital crop) were.

1844.—It was not the spring of 1844 that I became convinced that the maturity of the potato intended for seed materially affected the vigour of the future plant; and the crop of that year furnished me with some facts strongly corroborative of this opinion. The ripe black kidneys again failed to a great extent: not less, I think, than half the sets perished without vegetating, or only showed puny curled tops, and died without forming tubers larger than peas. The unripe reds were planted in a particular unfavorable place, viz: an old lane which had been just added to an adjoining field, and was so hard and dry that parts of it had to be broken up with pickaxes. In consequence of the long drought the planting was delayed for several weeks in hopes of rain, but as none came they were put into the ground as dry as dust, and planted without manure: no rain, with the exception of a slight shower, fell till the potatoes were up. Still in the whole of the piece, rather more than an acre, I could not discover that a single plant had failed, and the braird was uniformly strong and healthy. It will be well to present these results in a tabular form. I shall assume that the red potatoes bought in 1840, and the

black kidneys in 1841, had been taken up ripe; and their mealiness will justify such an assumption, as unripe potatoes are always watery, and unfit for the table.

ROUND REDS.

Year	Seed taken up.	Quality of crop.	Quantity of crop.
1840	Ripe (supposed)	Curled.	Failing crop.
1841	Unripe.	No curl.	Good crop.
1842	Unripe.	No curl.	Good crop.
1843	Ripe.	Curled.	Indifferent crop.
1844	Unripe.	No curl	Good crop.

BLACK KIDNEYS.

Year	Seed taken up	Quality of crop.	Quantity of crop
1841	Ripe (supposed)	Curled	Failing crop.
1842	Ripe.	Curled.	Light crop.
1843	Unripe.	No curl.	Capital crop.
1844	Ripe.	Much curled.	Very bad crop.

Had the above results been obtained by experience contrived for the purpose, they could not have borne more directly on the point in question, as we find that in the wet summer of 1843, and the extraordinary drought of 1844, as well as in the average seasons of 1841 and 1842, it accidentally happened that part of my potato crop was grown from ripe and another part from unripe sets, and in every case with success from the one and failure from the other: thus showing that the seasons could not be blamed as the cause of curl. To make these instances still more conclusive, it also happened that each of the two very different kinds of potatoes named were alternately affected by or free from curl: thus showing that it was not a peculiarity belonging to a particular kind of potato.

Thus far I have detailed my own experience only; but when it first occurred to me that over-ripening of the set was the cause of curl. I naturally became anxious to compare the experience of others with my own, and make many inquiries on the subject from other potato-growers. The information I thus received still more strongly confirmed me in my previous opinion, and I select one or two of the cases which appear to me most in point. The first which I shall bring forward gives the result of two opposite methods of treating potatoes intended for seed, as practised by two men living in the village of A., near York. I inspected both their crops at the time that they gave me the following statement:—

"J. C., gardener to Admiral P., has planted the same kind of ash-top kidney for more than ten years. The first year or two he took up those intended for seed at the same time as those intended for consumption; but found that they grew so much during the winter that they were obliged to be sprouted twice, which weakened the set so much as to injure the crop. He then tried the effect of leaving them longer in the ground—sometimes as much as three months after the plant was ripe. This produced the desired effect of preventing the growth during winter; but after some years' continuance he found the germinating power so much injured that they were a month or more later in coming up than those of his neighbors, treated in the ordinary way. In fact, he could scarcely get them to grow at all, and forced to change his plan."

"J. T., a laboring man, has grown ash-top kidneys for some years, and finds them better and earlier than when he ffrst got them. Is in the habit of planting those he intends for sets after taking up his crop of cabbages, which is at the end of June or beginning of July. He also takes them up before they are ripe; never finds them fail; they grow earlier in spring than potatoes not so treated, and make stronger and healthier plants. People frequently come to him for sets."

The contrast between these two instances is very complete. Two men, living not above two or three hundred yards from one another, and whose gardens, as far as I could judge, are precisely similar in quality, grow the same kind of potato in the same seasons. J. T.'s potatoes, being taken up unripe, improve both in vigour and early maturity—a great merit in this variety; whilst C.'s, which are left in the ground till over-ripe, will scarcely grow at all.

I will next instance the township of Sawdon, near Scarborough, which some years ago supplied large quantities of potatoes for seed to the warpland districts in the neighborhood of Selby. J. C. of Sawdon has been a potato-grower for more than thirty years; used formerly to send 500 or 600 bushels of Sawdon kidneys annually to Selby, where they were were used for seed, and the produce sent to London; used to grow as many as 200 bushels to the acre, now considers 50 bushels a good crop; has failed so repeatedly in the last five years in growing a crop that this year (1844) he has none; believe there is no one in the township who continues to grow the kidneys except one old man of the name of H. The township of Sawdon has been enclosed, planted, and other improvements made, within his recollection. H. of Sawdon Moor has occupied a few acres of land reclaimed from the moor for twentytwo years, and has grown Sawdon kidneys the whole time, and always in the same field! Only about one-third of it, however, is in potatoes at once. My informant adds that H. considers his potatoes are ripe when he takes them up, but he (informant) does not consider them as ripe as his neighbors; and when the elevation, exposure, and cold wet nature of the soil that he farms, are taken into the account, it seems probable that his potatoes are seldom if ever thoroughly ripened. In the case of Sawdon we have no direct evidence that the failure of the once more famous Sawdon kidneys is to be attributed to over-ripening of their seed potatoes, but the probabilities are strongly in favor of this supposition. In the first place, the potato itself, like all the kidneys, ripens early; and in ordinary situations would, if taken up at the usual time of potato-harvest, be too ripe to make good seed, and this is *now* found to be the case at *Sawdon*, and its growth is abandoned; but in former years, when the township (which borders on the moorlands, and partly consists of what farmers there call "wet clayey gravel," partly of black peaty soil) was unenclosed, undrained, and without shelter, the climate was sufficiently backward to make the "kidneys" immature when taken up, and consequently to be held in high repute, and sent to great distances for seed. It may be urged that the failure may with equal probability be attributed to the gradual deterioration of this species of potato; and to meet such an objection I have inserted the case of H. mentioned above, who still grows, with profit to himself and advantage to his neighbors, the identical species supposed to be worn out, and moreover has grown it every third year on the same soil for twentytwo years, and in the same township where it had been previously grown time out of mind.

I will now state the chemical facts which appear to me to confirm and explain the above-mentioned results of practice. It is notorious to potato-growers that a marked change takes place in the quality of the tuber when the stem and leaves wither, and that potatoes taken up when the plant is still growing are invariably watery, though a portion of the same plot, if of a good sort and in suitable soil, taken up a few weeks later, will be found light and mealy. This is probably owing to the deposition of starch in the tuber by the descent of the sap when the growth of the plant has ceased, and is apparently analogous to the very similar process described by Professor Liebig as taking place in all perennial plants. "All the carbonic acid which the plants (speaking of perennials only) now absorb is employed for the production of nutritive matter for the following year. Instead of woody fibre, starch is formed, and is diffused through every part of the plant by the autumnal sap." To remove every doubt on the subject, however, I took up portions of two kinds of potatoes growing in very different situations, and sent a ripe and unripe sample of each to Mr. Sprague, analyzing chemist, York, merely numbering the samples, and requesting to know the per centage of starch in each. The result was as follows:—

	Water.	Starch.	Re con'g of dry fibre, &c.
No. 1. Black kidneys, unripe -	68-7	17.7	13·5
No. 2, Ditto, ripe - -	72·0	17·9	10·0
No. 3. Round reds, unripe -	69·8	15.1	15·0
No. 4. Ditto, ripe, - - -	73·8	17·9	8·2

The proportion of water in the unripe samples here seems to be 4 per cent. less than in the ripe samples, but this was probably owing to the unripe samples having been taken up some weeks earlier, and kept out of the ground until the others were considered ripe enough. If this were taken into account, the increase of starch in the interval would be still more marked. As it stands, however, the altered proportions of the principal constituents are remarkable. Neglecting the water as unconnected with the present inquiry, we find that the proportion of starch to the other solid matters is as 177 : 135 in the unripe kidneys, but as 179 : 100 in the ripe; or reducing both to a common measure, we have—

Starch: other solid matters : : 131 : 100 in the unripe kidneys.
: : 179 : 100 in the ripe ditto.

In the round reds, reducing as before to a common measure—

Starch: other solid matters : : 100 - 100 in the unripe reds.
216 - 100 in the ripe ditto.

In each case it thus appears that the proportion of starch to the other solid matters had increased considerably in the interval which had elapsed between taking up the ripe and unripe parcels. The remark will here be probably made, that though an increase of starch has undoubtedly taken place, yet the quantity present was considerable before, why then should an addition to it injure the germinating power of the set? To answer this question it is necessary to state briefly the doctrine propounded by the most eminent vegetable physiologists of the present day, who affirm that during the act of commencing germination a substance called "diastase," is generated from the nitrogenous substances contained in the germinating seed, which diastase assists in the conversion of starch into

the gum, sugar, &c., which are required for the nourishment of the young shoot. The potato contains a very small per centage of nitrogenous matter. I would, therefore, venture the suggestion that the great addition made in the process of ripening to the already large stock of starch contained in the tuber may be more than can be converted into the gum, sugar, &c., by the small quantity of diastase generated in the germinating potato. If this be the case, then it would follow that the diastase being mixed with too large a proportion of starch (like leaven mixed with too large a proportion of dough) only does its work imperfectly, and the result is a weakly shoot, whilst a portion of the starch, failing to receive the vitalizing influence of the diastase, undergoes the natural course of decay, and produces the symptoms peculiar to dry-rot, wet-rot, or curl. This supposition is, of course, pure theory, and must not be confounded with the facts on which it is based. To make it quite clear where the one ends and the other begins, I will very briefly recapitulate. Facts have been brought forward to prove that ripe sets are subject to curl, and *vice versa*, also that a large addition is made to the quantity of starch in the potato in the process of ripening. Direct experiment also proves that "diastaste" is required for the germination of seeds, which diastaste can only be formed from some substance containing nitrogen: potatoes contain a very small proportion of such substances, and therefore can have but very little diastase. Here our facts end, but from these premises I would hazard the deduction that if we allow our seed potatoes to ripen they acquire more starch than can be made available to the growing shoot; which excess naturally decays, and then infects and injures, or even destroys, the plant with which it is connected. A similar effect is produced in the human subject when more food is taken into the stomach than the gastric juice is able properly to digest. The imperfectly converted aliment produces inconvenience of various kinds, and, if persevered in, derangement of the whole system, though the food itself in moderation may be perfectly wholesome.

[Concluded in our next.]

[The following is from the Genesee Farmer, edited by Dr. Lee, of Buffalo:]

POTATO ROT.

The editor of this paper has devoted much time for the last three weeks, to the investigation of the cause of this alarming and most destructive malady. He has examined affected plants in Oneida, Chenango, Cortland, Onondaga, Cayuga, and Monroe counties. At an agricultural meeting held in the village of Oxford, on the 16th of July, Judge Hyde of that place, presented several potato vines having all the outward characteristics of the blight. These vines had one or more grubs in the pith of each, that measured 1 1-4 inch in length, and about a sixteenth in diameter. The larvæ had eaten a passage through the the centre of the vine a foot or more in length, (commencing where it emerges from the earth,) and then made an opening out through the shell of the stem. The writer of this searched for these grubs for two weeks, through other parts of Chenango county, and in Cortland, Onondaga, and Cayuga counties, without finding any till last evening. Those that I now have, were found in vines which grew in the garden of David Wright, Esq., of Auburn. The grubs are precisely like those seen in Oxford.

There is hardly a bushel of new potatoes in this (Rochester) market, which do not contain more or less tubers attacked with gangrenous spots, similar to the malady of last season. I have just been to the vegetable market, in company with Mr L. B. Langworthy, to compare the potatoes with diseased ones which I had collected in Cayuga county, and have also examined several patches in the suburbs of the city, in company with the same gentleman. The diseases here are identical with those in Cayuga and Cortland. I can discover no difference in the blotches on the potatoes in this vicinity and those which I have seen in Oneida, Chenango, and Madison counties.

There are two distinct insects now feeding on the potato plant in all Central New York; one that resembles in size, form, and I think habits, the striped cucumber beetle. This insect is mostly of a dark-brown color, with narrow white streaks along its body. It eats the tender tops and buds for blossoms, and causes them to wilt. It hides under the potato leaf, and is easily caught. It does but little mischief. Dr. Harris calls it *Phytocoris lineolaris*; order Hemiptera.

The perfect insect which punctures the potato vine just above the ground, and deposits the egg that forms the large active worm which I have got, is probably a beetle; although it may belong to the *Lepidoptera*, or butterfly and moth family. The egg is deposited in the pith of the vine. When it hatches, the grub, or larva, eats off the vine all but its thin bark or covering. The vine wilts, turns brown, and dies sooner or later, according to the extent of the injury. The hole where the grub eats out and escapes, can often be found.

Mr Wright, of Auburn, suggested, that when the grub changes into a beetle, miller, or perfect insect, it might descend into the hill and sting the young potatoes, and thus cause them to rot; or perhaps leave the egg to be planted with the tuber in the coming spring. I have just examined the diseased blotches on many potatoes with a good glass, and discern nothing like the nit of an insect. The decomposition of the potato is, I think, accounted for by its unripe and defective condition. The organization of the elements that form *starch* and vegetable *albumen* being very imperfect, premature decay ensues. The law of vitality in a perfect tuber, which prevents the play of chemical affinities in living matter, like the rotting of dead animals and dead plants, has ceased to be operative in the unripe potato.

If affected potatoes are dug and exposed to the decomposing influence of light, free air, heat and moisture, they will rot with increased rapidity. Let them remain as long in the ground as practicable, and bury them promptly after they have been dug. One gentleman that owns a farm near this city, lost 3000 bushels last fall, which rotted in heaps soon after they were taken from the hill.

I am not prepared to suggest at this time, any preventive against the ravages of the insect that is now destroying thousands if not millions of bushels of this tuber.

From the Genesee Farmer.

INSECT BLIGHT.

Mr Editor—At the request of several gentlemen, I give you a few lines upon the subject of the ravages of an enemy to our orchards, commonly called the insect blight. Some cases of it have occurred in this vicinity from year to year, but this summer it has been very prevalent: and unless all interested join in its extermination, the production of quinces, apples, and pears will be very much diminished.

Scolytus pyri is the name of the insect causing this destruction, and it is so small as to be rarely seen, though he leaves marks visible in almost every orchard and yard. I have this summer examined many branches stung by them, some just beginning to wilt, and others quite dead, without being able to find the insect in its beetle shape, though I have found the larvæ in the shape of a minute white grub, which would not be noticed unless carefully searched for.

From the fact that many of this year's shoots have been affected at the centre of the growth, I think the eggs must be deposited in the spring; otherwise the grub moves about until he finds a tender place to commence his work. He enters the limb under or near a bud, taking a circuitous path towards the centre, in his way eating off most or all of the vessels which convey sap upward, so that the part above immediately wilts and dies. In quinces and pears, the limb often dies for some distance below, in some cases extending even to two years' growth, and we can readily see how soon a few insects will destroy a fine and thrifty tree. To save the tree, we must apply the knife freely, cutting away every limb as soon as it begins to wilt, a foot, if possible, below the point, where wilting commences, and immediately burning the parts cut off. If this is delayed many days, the destroyer escapes us, for he leaves almost as soon as his steps can be discovered. If trees are examined every noon, so much the better, for none would then escape.

I might write very much more about this enemy, but I know you like short articles. If a little attention is given to trees affected, we can easily exterminate Mr *Scolytus*.

Yours, J. W. BISSELL.

Rochester Commercial Nursery, July, 1845.

The Potato Blight.—The Bennington Gazette says that Milton Burrill, of Stockbridge, has been investigating very fully the subject of the disease and is now fully convinced that he has discovered the true cause, in the shape of an insect. He showed us a sample of the insect, which, through a strong magnifying glass, looks formidable, though so small. He is convinced that every potatoe field in that vicinity, is destined to fall as last year. He has visited many gardens and fields around us, and finds them all giving evidence of disease. If the cause is discovered, we hope the scientific in our laboratories, will soon make known some practical way of getting rid of the enemy—though we fear the remedy, if discovered, will be too late to save the present crop.

We have understood that house ashes, spread on the hills around the vines, after they have grown a few inches from the ground, is not only a remedy for the blight, but greatly facilitates the growth of the potato on some soils. It is very easy to make the trial.

Agricultural Schools.—Schools of Agriculture are established in Cayuga county, N. Y., and in Cornwall, Connecticut. Young men are taught in the sciences as auxiliary to agriculture, illustrated by practical farming. The terms are moderate, and health, industry and education, form a beautiful and a powerful trio.

THE WEATHER, CROPS, &c.

Our exchanges, from all parts of the country, especially in those which have suffered from the drought, are rejoicing over the falling of timely and acceptable rains, which have revived the drooping spirits of man and beast, and watered the parched earth. In some places the rains have been very heavy, so much so as to excite apprehensions of damage from that cause.

Notwithstanding the great and excessive drought which, with the hot weather in July, will render this season memorable, there seems no danger of any failure in the crops, taking the country through. The increased culture more than compensates for what has been lost in particular sections, for lack of rain. The wheat production, particularly, this season, is much larger than ever before: in some of the Western States, it has increased greatly.

In this section of New England, the grass falls short more than any other crop, while potatoes will produce much less than an average, the drought and blight both combining to render the yield small and poor. New potatoes are selling here for about 66c. per bushel, and we heard a farmer from Agawam say, this week, that he got only *a bushel* of one kind, from *eighty* hills. We hear from Maine, however, that the season has been very promising there, with plenty of rain, and that the yield of potatoes will exceed that of any former year.

[We fear, from later accounts, that this will not prove true.]

The western part of this country appears to have suffered more from the drougth than the eastern.

The rivers and all water courses are very low, as well as many wells and springs. Many factories have been obliged to suspend operations, either wholly or partially, for lack of water. We hear more complaints from Connecticut, on this score, than from any where else. Pastures had failed, and in some instances it had been difficult to find water for cattle.—*Springfield Mass. Republican.*

Water for Calves.—Accident recently taught me what, till then, I did not know, viz: that calves, while fed on milk, need free access to water. —I had supposed the milk (constituting their entire food) was enough without water. But in changing my calves from one pasture to another, they passed a water trough, and drank heartily. I acted on the hint, and have since supplied them, and find they need water as often as older cattle. No day passed without their using more or less. Perhaps every body else knew this: but least some may be as ignorant as I was, I thought best to speak a kind word for the calves, who cannot speak for themselves.— *Ohio Cultivator.*

Abortion among Cows.—Earl Spencer says, that since he placed lumps of rock salt in his pasture lands, none of his cows have suffered abortion.

Yellow Locust.—If you have but little fencing timber fit for posts on your farm, sow a few pounds of yellow locust seed, and when the plants are two years old they may be transplanted. In twelve years from the time the seed is sown, you may begin to cut them for posts.

Useful if true.—It is said that a spoonful of horseradish put into a pan of milk will preserve it sweet for several days, either in the open air or in a cellar, while other milk will sour.

CARROTS.

The following is copied from the records of the meetings of the N. Y. Farmer's Club.

"Wm. M'Kinster, of Middletown, Conn.—A written communication from him on the subject of soiling cattle was read. He asserts that carrots are fully equivalent, bushel for bushel, to oats for feeding horses in winter; that there is no difference in the working ability of a horse fed on carrots or oats.

"*The Chairman.* A bushel of carrots well cut up by a power root cutter, is as good as a bushel of oats for a working horse. I have tried the experiment fully and satisfactorily: I have fed twelve quarts of sliced carrots instead of twelve quarts of oats to a horse, the whole winter, and found no difference in the results. I gave hay with the carrots as we do with the oats. The carrots cost about ten cents a bushel and the oats nearly thirty cents a bushel.

"*Dr Underhill.*—The general average price of oats is about thirty-five cents a bushel.

"*The Chairman.*—Carrots are beneficial to horses that have the heaves. Others have practiced as I have with like satisfactory results. I have raised three hundred and twenty five bushels of carrots on three eights of one acre. I manured with decomposed peat and ashes. I subsoiled the hill. The white carrot is good—gives rather greater yield than the orange carrot—it grows more out of ground and is easier to gather. I do not attach much value to the ruta baga. It has however one advantage, it may be sowed late and upon any vacant spots in a field and is so far clear gain.

DURABLE FENCE.

Every farmer should have his lands well fenced. All will admit this, and yet how few have fences that can be trusted. In this climate, where frosts prevail, fences will need repairs every spring if built in the ordinary way; and it is one of the greatest vexations that farmers have to encounter, the inefficiency of their frost-shaken fences. The experience I possess in relation to the erection of permanent farm fences, has been considerable. A stone wall, which, for some farms, is the cheapest and most durable fence, should be constructed by first digging a trench eighteen inches deep by two feet in width. This should be paved with oak or yellow pine boards; and upon this commence laying the foundation, not with small stones that will work out, but with large flat stones that will lay well. It is likewise necessary to lay the stones lengthwise across the wall, which will bind and strengthen it. A wall put up in this manner will stand the heaving influences of frost much longer, and maintain its even and straight appearance, in which consists the beauty and efficiency of a wall, to amply repay the extra expense. Every wall should be made five feet high, which is a reasonable security for an enclosure against the depredations of most animals. It is my opinion that the cheapest fence for farms where stones cannot be had, and lumber is scarce and high, would be a fence constructed of cast-iron pickets, the pattern for the construction of which should not exceed one-eight of an inch for the most part, increasing to one-quarter where the holes are placed for securing them to the iron bars. The bars should be twelve feet in length, cast very light, with holes in them at proper distances for riveting. The riveting process is simple, and soon done, any blacksmith being able to rivet from ten to twelve pannels a day. To make the pickets as light as possible it is necessary to groove the pattern through in the middle three-fourths of an inch, leaving three inches at the top and bottom solid, excepting the holes where they are secured to the bars. Three feet in length enough for a picket. The expense of construction would be lessened by the use of wooden posts instead of iron; the latter, however, would be preferable. A farm provided with a fence of this material, if kept thoroughly painted, would be fenced, not for a day, but for all time.

I have found the most durable way to set posts and prevent them from being thrown out by frost, is to dig the holes large enough to admit of their being filled up with small stones and lime mortar; the lime prevents decay, and the stones prevent in a great measure the action of frost. It is of the utmost importance for farmers who wish contentment of mind, good neighbors, the enjoyment of their own property, and to be free from vexatious litigation, to put up good and sufficient fences both inside and out.

A few hints of Barns intended for Hay.—The site for these buildings is of the first importance. It should be in the vicinity of the hay field, for in the hot and sultry season it is a saving of time and labor to have them thus located. It should be, if possible, dug into the side of a hill, which will enable you to draw the load near the roof, which elevation will likewise enable you to pitch the hay down. All will admit it is easier. If you have no side hill on which to build, the posts of the barn should be at least fourteen feet high, which will secure ample bay-room, which is very much needed in all hay barns. The opening for putting in the hay should be at the east, as it will be shaded in the afternoon, the time in which most hay is put in. To construct barns for this purpose in the most economical way, I would recommend placing the posts upon the sills at the distance of twelve feet asunder, gird parallel with the sills half way up the posts, then board up by placing the boards lengthwise from plate to sill. For a roof, match the boards close and lay two thicknesses, taking care to break joints. Every barn should be provided with a conductor of lightening rod. An easy method is to put them up in the form of a half circle, stretching along the roof, supported by non-conductors. The fluid coming in contact with either end of the conductor will travel to the opposite end, where it will explode into the air.

Yours respectfully, H. Cooke.

The New York Sun says,—Poppy seed is in great demand, some farmers in the vicinity, we learn, having found that they can obtain three to five hundred dollars per annum out of an acre of land, by cultivating the poppy for the manufacture of opium, the quality of which is said to be superior to that imported from India, and we should not be astonished if, in a few years, we exported more opium to China than the Hon. East India Company.

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NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

Edited by Joseph Breck.

Boston, Wednesday, Sept. 3, 1845.

JOURNAL OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND FOR 1845.

Potato Disease.

The sixth volume of this interesting and able work has come to hand: it contains numerous Prize Essays, and Report, in which science and practice are combined. They may be read with interest and profit by agriculturalists in our own land, notwithstanding there is much in them that will not apply to our soil, climate and mode of cultivation.

As this work will not be accessible to our readers generally, we shall publish from time to time such portions of it as may be supposed acceptable. We have commenced in to-day's paper with an able Essay "on the prevention of Curl and Dry Rot in potatoes by H. S. Thompson. We think the disease therein described is analagous, if not identical with the one so prevalent in many sections of our own country; it may vary in its effects in different soils, seasons or climate. The use of unripe potatoes as recommended in the essay for the prevention of the disease, is certainly a remedy at once simple, safe and easy. The experiments and observations made by the writer for a number of successive years with different varieties of potatoes; in different soils shows a plausibility if not a certainty in the efficacy of unripe potatoes as a prevention. After reading the article we think our farmers will loose no time in digging potatoes sufficient for seed for the next season, before they are mature, if it is not already too late.

POTATO DISEASE.

We are sorry to learn from Maine, New Brunswick, and the West, that this mysterious disease prevails to a much greater extent in many sections than it did the last year, and that it has appeared earlier in the season. Many farmers predict the total loss of their crops; we hope their fears will not be realised, but from the effects of severe drought and the prevalence of this disease there is reason to expect a short crop, and it will be necessary for all to be very economical, and saving every vegetable that may prove a substitute. When turnips have been sown they should be carefully hoed and thinned, by so doing this crop will be greatly increased.

AMERICAN INSTITUTE OF THE CITY OF NEW YORK.

The managers of this institution announce, that liberal arrangements have been entered into for a Plowing Match, a Spading Match, an exhibition of pure blood and other cattle, and an Horticultural Show.

The Plowing and Spading Match is to take place in the vicinity of New York on the 14th of October. The Cattle Show will take place on the 15th, at the corner of 23 street and 5th Avenue, near Madison Cottage; and all entries of animals to be made at said Cottage on the 13th. The Horticultural Show will take place on the 9th of October, and all productions to be exhibited should be delivered at the rooms a day previous.

A National Agricultural Convention will be held in the city of New York Oct. 9th, to which farmers, gardeners and silk culturalists of the United States, and their friends are invited. Circulars with particulars may be had at the repository of the Institution in the Park.

MASS. HORTICULTURAL SOCIETY.

Exhibition of Flowers.

Saturday, Aug. 30, 1845.

From S. Walker, beautiful specimens of Phlox of various sorts and cut flowers.

From Messrs Winship, a great variety of cut flowers.

From Joseph Breck & Co, cut flowers in great variety, including annuals, perennials, roses, &c.

From Wm. Quant, a superb large bouquet of elaborate work.

From S. A. Walker, Brookline, a star bouquet.

From Miss Russell, one large and tastefully made bouquet and 3 small ones.

From Parker Barnes, six varieties of Fuschias in pots, and cut flowers.

From John Arnold, a fine display of roses.

From Messrs Hovey & Co, Roses, Verbenas, &c.

From James Nugent, fine dahlias.

From John Hovey, four bouquets and dahlias.

From W. B. Richards, fine dahlias.

From J. L. L. F. Warren, one large and five small bouquets, dahlias, gladiolus, &c.

From John A. Lowell, Wistenia corymbosa; Lilium lancifolium rubra and alba in pots.

The Committee award to Wm. Quant, $2 for best bouquet; to J. L. L. F. Warren $1, for 2d best. A gratuity of $1 to S. A. Walker, for a design; $1 to Miss Russell, for a fine bouquet; and $1 to Parker Barnes, for six pots of fuchsia.

For the committee, Joseph Brecl.

Fruits. By E. M. Richards, one of the Vice Presidents of the Society, several specimens of Apples. The variety, called by Mr. Richards the "Walpole Apple," is high flavored, of medium size, and may be classed as a first rate.

Messrs. Winship, Brighton, Hassel and other varieties of pears; Plums, Coe's Golden Drop, Imperial Gage, Washington, Belle de Rione (?) small and poor, Smith's Orleans, Lombard, &c.

Eben Wight, Dedham, very fine Bartlett pears, and several specimens of apples.

Stephen H. Smith, by J. L. L. F. Warren, several specimens of Apples, true to the names attached to them so far as the varieties are known to the Committee.

Aaron D. Williams fine varieties of Apples and two do. of Pears.

James Nugent, Plums and Peaches, some good specimens.

J. F. Allen, Salem, fine Bartlett pears, beautiful Nectarines, peard Summer Franc Real and some extra fine Black Hamburg Grapes.

George Walsh, Apples and Pears.

J. L. L. F. Warren, two varieties of Pears, viz: Bartlett and Julienne; Porter and other apples.

Mr. Buckminster, a large sized seedling Apple of good quality, which the committee named the Kennebec Seedling.

J. Richardson, Cambridge, Grapes and Plums.

By M. H. Simpson, a fine globe of Honey weighing 13 pounds.

E. E. Bradshaw, Plums, Early Black (?), Washington and Imperial Gage.

G. Merriam, three dishes of fine Peaches.

George O. Farmer, Roxbury, some fine branches of Black Hamburg, Black Prince, and other Grapes.

From the Garden of T. H. Perkins, Esq. by Mr. Quant, some fine Nectarines.

Parker Barnes, Peaches and Pears.

E. Brown, Lynn, Harvey and Bartlett Pears; also, Prince's Sugar pear, worthless.

Samuel R. Johnson, fine specimens of Washington Plums.

Otis Johnson, Lynn, Pears, Washington, Dearborn's Seedling, Summer Franc Real, and other sorts.

Mr. Batchelder, Harvard and Seckel Pears.

J. Lovett 2d, Beverly, fine Melons, Benoni Apples (fair,) Hassel and other pears. A seedling Pear (worthless,) and several specimens of the old varieties of Pears.

For the Committee, S. Walker, Chairman.

Vegetables. Two quarts of Lima Beans, from A. Bowditch, Roxbury.

Three fine Egg Plants, from Wm. Quant.

Wm. B. Kingsbury, Chairman.

Colman's European Agriculture No. 4, is now in press and will be ready for delivery the first of October.

ANCIENT PEAR TREE.

A friend has left with us some Pears from a tree in Chelsea, which is more than a century old. The tree is 37 feet high and six feet 9 inches in circumference, 6 inches from the ground: it branches out at the height of 6 feet 9 inches from the ground where it is 5 feet 10 inches in circumference. It has the appearance of having been grafted and was brought from England when young: it is now in a vigorous healthy state, and has produced annually an abundant crop. The present season more than seven bushels of Pears have been gathered from it; the variety is the old fashioned orange formerly esteemed as one of the best varieties of pear but has long since been superseded by others far more superior, and it is now considered of little value.

PEAT AND POND MUD.

In many localities, it is not practicable to obtain these enriching substances except at the driest seasons of the year, when the water is evaporated which usually covers them. The vast quantities of them which abound in many parts of the country, while the scant crops of the adjoining fields show how much their presence is needed, ought to stimulate our farmers to seize the present opportunity to cart them upon their fields.

Many have been disappointed from the use of swamp muck or peat. Its results are much less striking than those of farm yard manure, not only because it possesses less inherent richness, but because it contains far less of soluble parts, and consequently imparts its strength more slowly to growing plants. This quality however only makes it more enduring. Chemists have found that by decoction in water, vegetable mould loses a small portion of its weight by solution; but if the remaining insoluble portion is exposed to air and moisture a few months, another part may again be dissolved. Thus, peat, muck, and all decayed vegetable fibre, becomes a slow, but lasting source of nourishment to plants.

Disappointment also results from the want of thorough intermixture with the soil. If peat or muck is merely spread in masses upon the surface of the soil, and then plowed in, it rarely proves of much benefit, until, by several years tillage, it becomes thoroughly intermixed. To prevent such failure, it should be very thoroughly and repeatedly harrowed, so as to promote a thorough admixture with the surface soil, before it is turned under by the plow.

By such treatment as this, heavy soils may often be greatly improved, and rendered lighter and more free, as well as more fertile.

Pond mud is sometimes a highly fertilizing substance. Where the materials which streams deposit, consist of road-washings, or the drainings of farm yards or of manured fields, they constitute frequently a compost of the richest kind. The same remark will apply to stagnant ponds which have been much frequented by animals, and which have become dry. In the latter part of summer and early in autumn, these valuable materials may be easily carted out on the adjacent lands, and they form one of the best and most suitable manures for wheat, being free from the objections which exist in cases of unfermented or long farm-yard manure.

FISH FOR SATURDAY.

Those who encourage the fisheries and keep up the good old fashion of a fish dinner on Saturday, will find an excellent article at Simeon Butterfield's No. 24 1-2 Long Wharf, which he calls the "English table fish."

MASS. HORTICULTURAL SOCIETY.

EXHIBITION OF GERMAN ASTERS. The exhibition of German Asters for premiums will take place at the Society's Room on SATURDAY, September 7th, instead of September 14th, as advertised in the schedule of premiums.

JOSEPH BRECK, Chairman
of Flower Committee.

Boston, Aug. 25. 2w.

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded Northerly exposure, to the week ending Aug. 24.

Aug., 1845.	7 A.M.	12, M.	5, P.M.	Wind.
Monday, 18	66	75	72	E.
Tuesday, 19	68	83	73	N.
Wednesday, 20	67	71	59	E.
Thursday, 21	53	66	56	E.
Friday, 22	56	71	59	E.
Saturday, 23	53	82	68	S.W.
Sunday, 24	59	74	67	N.W

BRIGHTON MARKET.—MONDAY, Sept. 1, 1845.

Reported for the N. E. Farmer.

At market 750 Beef Cattle, 475 Stores, 3300 Sheep and 1100 Swine.

PRICES.—*Beef Cattle*—The best qualities of Cattle were scarce and an advance was effected from last week. Extra $5—First quality $4,75—Second, $4,00 a 4,50. Third $3 a 3,50.

Stores—Prices not established.

Sheep.—Lambs from $1,25 to $1,75. Old Sheep $1,50 to 2,00.

Swine.—Two entire lots 3 and 3 1-4—lots to peddle 2 3-4 and 3 3-4. Old Hogs 3 1-2, 3 3-4 and 4c. At retail from 3 1-2 to 5.

WHOLESALE PRICES CURRENT.

Corrected with great care, weekly.

SEEDS. Herds Grass, $1 75 a 2 00 per bushel. Red Top 50 to 60 cents. Clover—Northern, 9 to 10c.—Southern, 8 a 9c. Flax Seed. $1 50 per bushel. Lucerne, 33 c. per lb. Canary Seed, $1 50 a 2 00 per bushel. Millet, 1 75 to 2 00.

GRAIN. The market closes very dull, with some slight decline in prices; dealers hold off, preferring to lessen, rather than increase their present supplies.

Corn—Northern, new, bushel 63 a 64—Southern, round yellow, 62 a 63—Southern flat yellow, 62 a 00—do. do. white 57 a 58—do New Orleans, 55 a 58—Barley 00 a 00—Rye, Northern, 70 a 75—do. Southern, 70 a 72—Oats Southern, 36 a 38 — Northern do. 38 to 00—Beans, per bushel 0 00 a 0 00.—Shorts, per double bush. 00 a 00—Bran 00 a 00.

FLOUR. Market firm at the advance occasioned by the late advices from England, and at the close of the week prices were rather tending upwards.

Baltimore, Howard Street, 4 mos. cr. new, $4 75 a 4 87—do. wharf, $0 00 a 0 00—do. free of garlic, $0 00 a 0 00—Philadelphia do. 4 mos. $0 00 a 0 00 — Fredericksburg, low Pd new $4 75 a 0 00—Alexandria, wharf, 4 75 a 0 00—Georgetown, $4 87 a 0 00—Extra do. 0 00 a 5 25—Richmond Canal, $0 00 a 0 00—do. City, $6 00 a 0 00—Petersburgh, City, $0 00 a 0 00—do. Country $0 00 a 0 00—Genesee, common, cash, $4 37 a 4 62— do fancy brands, $4 87 a 5 50—Ohio, via Canal, $4 25 a 4 75—do do New Orleans cash $0 00 a 0 00. Rye, $3 25 a 0 00—Indian Meal in bbls. $2 50 a 2 62.

PROVISIONS. A further increased demand has been experienced since the last report from the trade and for N. York market.

Beef—Mess 4 mo. new bbl. $9 50 a 10 00—Navy—$8 75 a 9 25.—No. 1, $0 00 a 0 00—do Prime $6 00 a 6 50—Pork—Extra clear 4 mo. bbl. $15 00 a 00 00—do Clear $00 00 a 14 50 do. Mess, $13 50 a 13 75—do Prime $10 75 a 11 00—do Mess from other States,— a — —do Prime do do $0 00 a 0 00 do. Cargo do. 0 00 a 0 00 —Clear do do $00 00 a 00 00—Butter, shipping, 12 a 15—do store, uninspected, 8 a 12—do dairy, 15 cts. a 18—Lard, No. 1, Boston ins. 8 a 8½—do South and Western, 8 a 8½— Hams, Boston, 8½ a 9—Southern and Western, 8¼ a 9—Cheese, Ship'g and 4 meal 6 a 8—do new milk, 7½ a 8½.

WOOL. Duty. The value whereof at the place of exportation shall not exceed 7 cts. per pound, 5 per cent. adval. All whereof the value exceeds 7 cts. per pound, 40 per ct. ad. val. and 3 cts. per pound.

The state of the market for this article has not experienced any essential change since the last review.

Prime or Saxony Fleeces, washed, lb. 37 a 40 c.—American full blood, do 35 a 37—Do. 3-4 do 33 a 34—Do. 1-2 do 31 a 32 -1-4 and common do 28 a 30 — Smyrna Sheep, washed, 20 a 22—Do. unwashed, 10 a 15—Bengasi do 6 a 12—Saxony, clean, 00—Buenos Ayres unpicked, 7 a 10—do. do. picked, 10 a 14—Superfine Northern pulled lamb 36 a 38—No. 1 do. do. do. 31 a 35—No. 2 do do do 23 a 25—No. 3 do do do 14 a 17.

HOPS. Duty 20 per cent.

Nothing doing in the article beyond a retail trade at 11 a 12c. per lb. for the last crop.

1st sort Mass. 1844, lb. 00 a 00 ; 2d do 0 a 0.

HAY, 12 to 12½ per ton—Eastern Screwed $13 to 14.

EGGS, 12 to 14.

BUCKTHORN SEED WANTED.

Cash will be paid for a few bushels first rate BUCKTHORN SEED, to be delivered at the store of the subscribers by the 15th October.

JOSEPH BRECK & CO.
N. E. Seed Store 51 & 52 N. Market st.

STRAWBERRY PLANTS.

The subscribers can furnish all the most desirable varieties of *STRAWBERRY PLANTS* now in cultivation.

AMONG THEM ARE

Swainstone's Seedling,	Elton Pine,
Ross's Phœnix,	Bishop's Orange,
British Queen,	Keen's Seedling,
Hovey's Seedling,	Early Virginia,
Myatt's Seedling,	Downton, English Wood, &c.

☞ Plants will be packed to send any distance.

Gentlemen who intend to form new plantations, are reminded that the month of August is the most suitable time of the year to do it. All orders will be promptly attended to, and good plants sent.

J. BRECK & CO.
Boston, Aug. 5. Nos. 51 & 52 N. Market street.

HERDS GRASS OF EXTRA QUALITY.

The subscribers have received a few tierces of extra fine *HERDS GRASS SEED*, perfectly free from all foul seed, which they can confidently recommend to farmers for August sowing. Also, their usual supply of good *GRASS SEED*, of all kinds.

JOSEPH BRECK & CO.
Nos. 51 & 52, North Market street, up stairs.
Boston, July 23, 1845.

2000 SUPERB TULIP BULBS.

JOSEPH BRECK & CO. offer for sale the celebrated and costly bed of Tulips imported for the Public Garden, and pronounced by competent judges to be the finest collection in this country. The subscribers obtained the Massachusetts Horticultural Society's premium of $8 for the best thirty distinct varieties which were taken from this bed. They will be sold at the very low price of $3 per dozen, which is not one half the cost of many single bulbs in the collection. There never was a better opportunity for amateurs to indulge themselves with a bed of these truly splendid flowers.

JOSEPH BRECK & CO.
Nos. 51 & 52, North Market street.
Boston, July 29.

HOWARD'S PREMIUM SUBSOIL PLOWS.

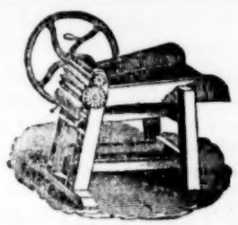
The sub-oil low is unquestionably the most importan agricultural implement of modern invention. It is considered by the best informed practical farmers of Great Britain and our own country, as an indispensable article in the most profitable husbandry. Says that eminently skilful and intelligent agriculturist, Mr. Phinney, of Lexington: "such is the estimate in which I hold this important implement, that I should consider it a great piece of improvidence to put in a crop without first subsoiling the ground." The subsoil Plows manufactured by Mr. Howard, are of two sizes—the smaller obtained the highest premium offered by the State Agricultural Society at its late exhibition at Worcester. The committee to award the premium on Subsoil Plows, in their report say:—"The committee were pleased with the neatness and firmness of structure of these Plows—characteristics which have distinguished all the Plows of Mr. Howard that have come within their observation. *Utility* and not *show*, are their peculiar features. * * They were astonished to find with what ease and perfection the hard pan could be stirred, and broken to the depth and width of 8 or 9 inches, for such was the operation of the medium size Plows, with a power not exceeding that ordinarily required for moving a surface Plow at the same depth—and they found the Plow might be guided with less labor and fatigue than the surface Plow. * * They confidently recommend the subsoil Plow to the attention of the farmers of the Commonwealth."

The improvement in the length of the handles of Mr. Howard's Plows, suggested by the committee, has been made—and the undersigned are now prepared to furnish these invaluable implements wholesale and retail.

JOSEPH BRECK & CO.
N. E. Agricultural Warehouse and Seed Store, 51 & 52, North Market Street, Boston.

HORTICULTURAL TOOLS.

A few cases of superior Horticultural Tools, for gentlemen or ladies' use For sale by JOS. BRECK & CO., 51 and 52 North Market Street.



GREEN'S PATENT STRAW CUTTER.

JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it efficiently.

2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.

3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.

4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.

DURHAM BULL FOR SALE.

A full blood DURHAM BULL, from the stock of G. Vail, Esquire, of Troy. A very fine animal, and now one year ten months old.

Also, a BULL CALF of the same stock, five months old,—may be seen at the Farm of JOHN CLARKE, sen, on the Worcester Turnpike, in Brookline April 15.

Guano! Guano!

Just received and for sale in lots to suit purchasers, 20 tons African and South American Guano, of superior quality, the best ever brought into this market. The African, which is part of the cargo of the brig Samos was analyzed by one of the first chemists of this country, and pronounced to be of the first quality; it has been fairly tested by many of the farmers and gardeners in the vicinity of Boston, and has fully equalled their highest expectations. We can fully recommend the South American, which has also been carefully analyzed, and found to be a splendid article, and very superior, being free from stones and hard substances. For sale by the ton, bbl. or bag. Orders addressed to JOSEPH BRECK & CO., 51 and 52 North Market street, will be promptly attended to.

Boston, March 25, 1845.

CORN SHELLER.

A Corn sheller is one of the most convenient and labor saving implements that the practical farmer has in use. Various machines for this purpose have been invented. It can be used in all cases for large or small sized ears. It is very simple in its construction, and durable in its operation, and no way liable to get out of order; one man can work it to good advantage, though a man to turn, and a boy to feed it, works it much better than one alone. They are so light and portable, as to be easily removed from place to place, and one machine will serve for several families or even the inhabitants of a small town.

For sale at the Agricultural Warehouse and Seed Store Nos. 51 and 52, North Market Street.

JOS. BRECK & CO.

WANTED,

A situation as superintendent or manager of a Farm, or estate, by an English farmer, who is desirous of introducing (to a judicious extent,) the most improved methods of European Agriculture, of which he has a competent knowledge in all its branches.

For particulars apply to the Editor, or to
REV. J. O. CHOULES,
Aug. 28. Jamaica Plain.

NOTICE.

The full blood imported Ayrshire Bull WALLACE, (with pedigree complete,) will be at my farm in Chelsea, for a short time, for the use of a few Cows.

BEN. SHURTLEFF, Jr.
May 28, 1845.

GEDDES'S HARROW.

This excellent implement, considered a great improvement on all other kinds, is for sale at the N. England Agricultural Warehouse, 51 and 52 North Market street, by
May 21. J. BRECK & CO.

MISCELLANEOUS.

Making Madeira Wine.—Interesting to Wine-bibbers.—Commander Wilkes, in his narrative of the Exploring Expedition, gives the following account of the process of making Madeira wine, which he witnessed while stopping at the island of Madeira. It would seem (says the Louisville Journal,) that this favorite drink is not made in the most unexceptionable way:

"On our approach to the wine factory, (a kind of shed,) we heard a continued thumping, and on entering, saw six men stamping violently in a vat, six feet square by two feet deep, three on each side of a huge lever beam, their legs bare up to their thighs. On our entrance they redoubled their exertions, *till the perspiration freely poured from them.* [We presume this contributes to the *peculiararity* in the flavor of 'Old Madeira.'] After the grapes had been sufficiently stamped, and *the men's legs well scraped*, the pulp was made into the shape of a large bee-hive, a rope made of the young twigs of the vine being wound around it. The lever was then used, which has a large rock or stone attached to it by a screw. The juice flows off and is received in tubs. The produce of the press is, on an average, about fifty gallons daily. Each gallon requires about two bushels of grapes. The taste is very much like sweet cider. The general average is from one to three pipes of wine per acre annually. The south side of the island produces the finest wines. The common Madeira is made from a mixture of three kinds of grapes. After being expressed, the wine is put into casks, ferments, and is clarified with gypsum or isinglass, after which two or three gallons of brandy are added to each pipe."

Scene in a School Room.—"First class in philosophy come up. Ichabod, what are the properties of heat?"

"The properties of heat is to bake bread, bile water, cook eggs, and"——

"Stop—next. What are the properties of heat?"

"The properties of heat is to warm your toes, when they gets cold, by holding 'em to the fire, and so forth."

"Next. What are the properties of heat, Solon?"

"The chief properties of heat is that it expands bodies, while cold contracts them."

"Very good, Solon. Can you give an example?"

"Yes, sir. In summer when it is hot, the day is long; in winter, when it is cold, it gets to be very short."

"Go to the head, Solon: boys take your seats:" and the learned pedagogue was lost in wonder, that so familiar an instance of illustration should have escaped his philosophic mind.—*Somerville Spy.*

Misery in England.—Nothing could more powerfully express the miserable condition of the great masses of the poor in England, than the statement lately made in the House of Commons, by Mr Wakely, that while the paupers of the Poor Law Union in Hampshire, were employed in crushing bones for manure, they *quarrelled with each other for the bits of marrow* they might chance to find, and greedily *knawed off the putrid meat* from the extremities of the bones. The London Times well remarks that this is "more like the picture of a dog-kennel and fighting dogs than of Englishmen." And yet the *philanthropists* of England bewail the lot of the negro slaves of this country!—*Boston Mail.*

Attaining Wealth Suddenly.—Among the various means of attaining sudden wealth in this country, the discovery of a popular "patent" medicine has often proved singularly successful. A correspondent of the Charleston Courier, writing from New York, cites various examples in point. Brandreth, by his pills, has risen from a poor man to be a man of extensive fortune. He has now at Sing Sing, a three story factory for grinding his medicine materials. Aloes are carried into it by the ton, and pills out of it by the cartload, and despatched to every part of the Union. He has expended thirtyfive thousand dollars in a single year for advertisemnts. Comstock began with nothing, but by crowding his patent medicines, has been able to purchase one of the finest houses in Union Place, and gives magnificent soirees, suppers, &c. Moffat, adding bitters to pills, has run up a handsome fortune of nearly $300,000. Sherman, taking the lozenge line, has emerged from his little shop in Nassau street, and become a buyer of lots and houses by the wholesale. I need not mention Swaim, of Philadelphia, who, by the profits from his "panacea," can afford to buy a single head ornament for his daughter at a cost of $20,000—to prove that we are a pill-swallowing and bitters-drinking people.

Cure for Diarrhœa.—A certain cure for this complaint is found in rice water. Boil the rice, take the water, make it palatable with salt, and drink it copiously while warm. We never knew this simple thing to fail.—*N. Y. Mechanic.*

The Toper's Toast—given at a Temperance Jubilee, on Paris Hill, Me.:—

King Alcohol—An old friend on his last legs. I must stand by him now, for he has stood by me when I could n't stand by myself.

Sharp Hit.—Some ladies congratulating Dr. Johnson on having omitted all improper words in his dictionary, "Ah," said the lexicographer, "then you have been *hunting* for them already, my pretty dears, have you?"

HOWARD'S IMPROVED EASY DRAUGHT PLOUGH.

Great improvements have been made the past year in the form and workmanship of these Ploughs; the mould board has been so formed as to *lay the furrow completely over, turning in every particle of grass or stubble, and leaving the ground in the best possible manner.* The length of the mould board has been very much increased, so that the Plough works with the greatest ease, both with respect to the holding and the team. The Committee at the late trial of Ploughs at Worcester, say,

"Should our opinion be asked as to which of the Ploughs we should prefer for use on a farm, we might perhaps say to the inquirer, if your land is mostly light and easy to work, try Prouty & Mears, but if your *land is heavy, hard orrocky,* BEGIN WITH MR. HOWARD'S."

At the above mentioned trial the Howard Plough *did more work, with the same power of team, than any other plough exhibited.* No other turned more than twentyseven and one half inches, to the 112 lbs. draught, while the *Howard Plough turned twentynine and one half inches, to the same power of team!* All acknowledge that Howard's Ploughs are much the strongest and most substantially made.

There has been quite an improvement made on the shoe, or land side of this Plough, which can be renewed without having to furnish a new landside; this shoe likewise secures the mould board and landside together, and strengthens the Plough very much.

The price of the Ploughs is from $6 to $15. A Plough sufficient for breaking up with four cattle, will cost about $10 50, and with cutter $1, with wheel and cutter, $2 50 extra.

The above Ploughs are for sale, wholesale and retail, a the New England Agricultural Warehouse and Seed Store Nos. 51 & 52 North Market Street, by

JOSEPH BRECK & CO.

MARTIN'S MASSACHUSETTS PREMIUM EAGLE PLOWS.

The subscribers have for sale at their extensive Agricultural Warehouse, No. 51 & 52 N. Market street, *MARTIN'S MASSACHUSETTS PREMIUM IMPROVED EAGLE PLOWS.*

Mr. Martin's Plows combine new and important improvements adapting them to the different qualities of soil and the various modes and systems of culture His Eagle Plows, as improved, are much longer, the mouldboard, landside and point, or share, all extended without any addition to the width or heel in its work; thus adapting this Plow to the more perfect turning under of the greensward, and inverting of the furrow-slice, so desirable in greensward plowing. The principle of these Plows is such, from where the furrow-slice is received upon the mouldboard to where it leaves it, that it enables the Plow to take up the furrow-slice with the greatest possible ease, bearing equally and lightly over the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken, laying the furrow-slices closely and compactly side by side, and creating but slight friction upon the face of the mouldboard in passing through the soil. Thus the Plow requires but very little power of draft beyond what is necessary to cut out the furrow-slice.

In testing the quality of Plows, the power by which it is moved, the ease with which it is handled, and the manner in which it completes the work, are three important points, all of which are wisely, accurately and judiciously preserved in these improved Plows.

The character of these Plows for ease of draft and management, and the excellence of their work, though well established in the minds of the farming community, were most fully and satisfactorily exhibited to the public at the grand trial of Plows by the Massachusetts Agricultural Society, at Worcester, October 9th, 1844, whose able and impartial committee awarded the highest premium of $50 to B. Martin, for the best Plow, for doing the best work with the least draft, in a trial open to the whole Union—this Plow running in its natural course, and keeping its true position, without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draft than any other Plow on the ground.

These Plows, as improved, are considered to be nearest to perfection of any implements of the kind in this country, as well in respect to material and workmanship, as in form of construction.

At the late Cattle-Show and Plowing-Match of the Worcester County Agricultural Society, in the heart of that most valuable agricultural county, B. Martin's Plow received the highest and most enthusiastic commendation from intelligent and experienced practical farmers, who know and are the most competent judges.

His castings are of a superior kind, the workmanship not inferior to any other Plows in this country, and his timber being the very best of white oak; and every farmer knows that good timber in his Plows is of the utmost importance—all of which in fact renders B. Martin's Plow the very article every farmer wants. The high character of these Plows is abundantly sustained by a continued and extended patronage, which the manufacturer hopes by his efforts and exertions to retain Being himself an experienced Plow-Maker, he will not spare any exertions in order to render his Plows a superior article.

Gentlemen are requested to call and examine these Plows before they purchase. JOSEPH BRECK & CO.

Boston, March 24.

NEW ENGLAND FARMER,

A WEEKLY PAPER.

Terms, $2 per year *in advance*, or $2 50 if not paid within sixty days.

Remittances, *not exceeding ten dollars,* at any *one time,* may be made as follows:—A subscriber owes us two or eight dollars, which he wishes to remit us. He will pay this amount to the Post Master *in his own town,* and take his *receipt* for it, as money paid him on *our* account. He will then send that *receipt,* enclosed in a letter, *to us.* We pass it to the Post Master in Boston, and get the money for it. This arrangement does away with nearly the whole risk of making remittance, and puts every subscriber in possession of "suitable funds" for that purpose.

TUTTLE AND DENNETT, PRINTERS
21 SCHOOL STREET.